Remarks

Claims 34-53, 56, 57, and 67-69 have been cancelled. Claims 22, 23, 30, 70, and 78 are currently amended. Claims 10-15, 22-33, and 70-81 are pending.

Claims 1-15 have been indicated as being allowed. Claims 76 and 77 were objected to. Claims 76-78 have been indicated to be free of the prior art for reasons discussed in Paper No. 5, paragraph 8.

Claim 23 has been amended to clarify the claimed invention.

112 Rejections

Claims 22, 24-35, and 78 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claim 78 is said to be improperly dependent from claim 80 and the phrase "said (meth)acrylic polymer" lacks antecedent basis. Claim 78 is now dependent from claim 77, providing antecedent basis for "(meth)acrylic polymer". Claim 22 was amended to provide antecedent basis for "said release material". Claim 30 was amended to correct grammar. Accordingly, the above rejection of claims 22, 24-35, and 78 should be withdrawn.

103 Rejections

Claims 22-33, 70-75, and 79-81 were rejected under 35 USC § 103(a) as being unpatentable over Patent Abstract of Japan (volume 2000, No. 15, April 6, 2001) ("JP2000345113A") in view of Collins (U.S. 5,847,649).

Applicants' response is based on a machine translation of JP2000345113A submitted with Applicants' last response.

As stated in Applicants' specification at page 2, lines 12-24, it is known that the surface chemistry of silicone-coated liners traditionally used in double-sided adhesive tape is altered when E-Beam treated. When the adhesive polymer is E-Beam treated through the liner, the liner release of the side of the liner contacting the adhesive polymer is only slightly increased. In

contrast, the liner release on the other side of the liner, i.e., the non-adhesive side treated with E-Beam, is greatly increased. (See Applicants' application, Comparative Example 6, page 25.) This increase in liner release is detrimental because the non-adhesive side of the liner comes in contact with the adhesive polymer once it is wound into its final product roll. This creates an undesirable situation in the final product wherein the liner is removed from the "right side" of the adhesive tape before the "wrong side". This is known as "liner confusion". In some cases, the liner cannot even be removed. This is known as "liner blocking". Even when the adhesive is E-Beam treated directly (i.e., not through the liner), the side of the liner opposite the adhesive will be affected if the radiation penetrates through the liner. (See, Applicants' specification page 2, lines 12-24, and Comparative Example 6, page 25.)

JP2000345113A relates to a roll of double-sided tape prepared from a pressure sensitive adhesive formed by E-Beam irradiating the uncured pressure sensitive adhesive on a release liner. This results in a difference in tackiness of the two adhesive surfaces which in turn results in a difference in the release property from the front and back surfaces of the release liner, enabling the adhesive to adhere to one side of the release liner. (See, paragraphs [0008], [0012], [0014] – [0015], and [0040].) The need to use liners with different release agents on each side is made unnecessary. (See, paragraph [0023].) JP2000345113A teaches that any release agent, such as silicon resin, coated on both sides of a paper, polyethylene, or polyester film is suitable for use as a liner. (See, paragraph [0023].)

The present invention is directed to an adhesive article comprising a liner backing having a first and second side; an adhesive on a first side of the liner backing; and a coating material on the second side of the liner backing. The coating material has a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups such that, upon exposure to E-Beam radiation to crosslink the adhesive, the liner release value of the second side of the liner backing to the adhesive is less than the liner release value of the first side of the liner backing to the adhesive. (See, claim 22.) Release coating material that has too many functional groups or that does not form a tight crosslink network "block" or exhibit high liner release values. (See, Applicants' application, pages 31-32, Comparative Examples 11a and 12.)

Nothing in JP2000345113A teaches or suggests selecting a release coating having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups. In fact, nothing in JP2000345113A teaches or suggests that the release coating must be selected to be compatible with exposure of the liner to E-Beam radiation.

Nothing in Collins cures these defects in JP2000345113A. Collins describes use of a differential release liner as a carrier for a plurality of markers. (See column 3, lines 3-7.) Collins does not cure an adhesive layer on a liner with E-Beam radiation. Collins does not teach or suggest that the differential release liner comprise a release coating having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups. For at least these reasons, claim 22 is patentable over JP2000345113A in view of Collins.

Claims 23-33 each add additional features to claim 22. Claim 22 is patentable for the reasons given above. Thus, claims 23-33 are likewise patentable.

Claim 70 has been amended to include a release coating having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups. Neither JP2000345113A or Collins teach or suggest a liner comprising a release coating having a sufficiently tightly crosslinked network, levels of polar functionalities and reactive groups or that the release coating must be selected to be compatible with exposure of the liner to E-Beam radiation. For the reasons stated above, Applicants believe that claim 70 is patentable over JP2000345113A in view of Collins.

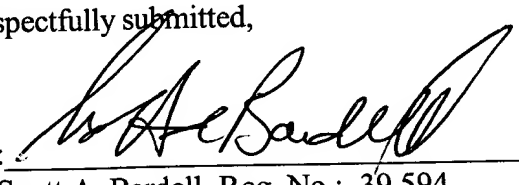
Claims 72-81 each add additional features to claim 70. Claim 70 is patentable for the reasons given above. Thus, claims 72-81 are likewise patentable.

Claim 71 is directed to an adhesive article made by a process in which the adhesive has a liner contacting each of its surfaces. Neither JP2000345113A or Collins teach or suggest using two liners. For the reason stated above, Applicants believe that claim 71 is patentable over JP2000345113A in view of Collins.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

21 November, 2003
Date

By: 
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